

**REMARKS**

Claims 124, 125, 128, and 130 are amended, and claims 147-49 have been added. At this time, claims 124-130 and 143-149 are under examination. Applicants have amended the claims to replace "preform" with "fabricated article," which includes shaped and unshaped articles such as barstock, cups, cylindrical bars and films. See applicants' specification at page 16. A "preform" is defined in interfering U.S. Patent No. 6,017,975 to Saum *et al.* as "a shaped article which has been consolidated, such as by ram extrusion or compression molding of UHMWPE resin particles into rods, sheets, blocks, slabs or the like." See column 3, lines 26-30. Applicants' "fabricated articles" and Saum's "preforms" thus refer to common subject matter. Support for wear resistance can be found at page 3, fourth full paragraph and page 6, second full paragraph. Support for oxidation resistance can be found at page 15, first full paragraph. Applicants also have deleted the "annealing" language in the claims because it is unnecessary by virtue of the recitation of heating to a temperature above the melting point -- this amendment moots the examiner's rejections. Saum's claims also require melting by virtue of the 150°C recitation, which is above the melting point of ultrahigh molecular weight polyethylene. See the '975 patent at column 4, lines 60-63.

Reconsideration and allowance of the claims in view of the amendments and explanations set forth herein are earnestly requested.

***Anticipation Rejections***

On pages 2-3 of the Office Action, the Examiner has rejected the claims 124-130 and 143-46 under 35 U.S.C. § 102(a) and alleged as being anticipated by Saum *et al.*

(the '975 patent). Applicants disagree with the Examiner and reiterate that the '975 patent is not prior art under 102(a).

Applicants have previously explained that the earliest possible prior art date for the '975 patent is October 2, 1996 from U.S. Provisional Serial No. 60/027,354 based upon 35 USC § 102(e).<sup>1</sup> The Examiner, however, applied the '975 patent under 35 USC § 102(a), and the earliest 102(a) date for the '975 patent is the January 25, 2000 issue date, long after applicants' filing dates. Applicants have demonstrated previously that the pending claims are entitled to priority dates of February 13, 1996 and October 2, 1996. Support for these claims can be found in the citations contained in the declaration of Dr. Orhun Muratoglu, dated October 6, 2003 and of record in this prosecution. Applicants provide below another claim chart showing support for the present claims in the priority applications.

U.S. Serial No. 08/600,744

CLAIM	EXEMPLARY SUPPORT IN THE '744 APPLICATION
<b>124.</b> A process for preparing a medical implant having an improved balance of wear properties and oxidation resistance comprising the steps of:	Improved mechanical properties are disclosed at pages 10-11 and Tables 1-6. Medical implants are disclosed at page 1, lines 3-5 and original claims 1-12. Oxidation resistance is discussed at page 3, lines 6-7, and page 23,

<sup>1</sup> The Examiner, however, has not established that the '975 patent is prior art under 35 USC § 102(e) because the Examiner has not analyzed the chain of priority claimed by the '975 patent, and thus has not demonstrated that the '975 patent is entitled to its priority date. See MPEP § 2136 (Rev. 1, February 2003).

	lines 16-17. Wear resistance is discussed at page 2, line 23 and page 23, last paragraph.
irradiating a fabricated article comprising ultrahigh molecular weight polyethylene to form free radicals in the ultrahigh molecular weight polyethylene;	Types of polyethylene, including ultrahigh molecular weight polyethylene, are disclosed at page 16, lines 4-7. Irradiation is disclosed at page 13, line 22. Formation of free radicals is a natural consequence of irradiation and results in the creation of cross-links upon recombination. See page 10, lines 14-15; page 14, line 26 to page 15, line 5; and page 23, lines 7-14. Fabricated articles are disclosed at page 3, last paragraph and the paragraph bridging pages 11-12.
heating the fabricated article in a substantially oxygen-free atmosphere to a temperature above about 150°C, for a time sufficient to recombine substantially all of the free radicals and cross-link the ultrahigh molecular weight polyethylene;	Temperatures above the melting point, including those above 150°C, are disclosed at page 4, lines 10-11; page 13, lines 14-15 and Example 3. The use of a low oxygen-containing nitrogen atmosphere in Example 3. Recombination of free radicals is discussed at page 23, lines 7-17 and original claim 2.
cooling the cross-linked fabricated article while maintaining a substantially oxygen-free atmosphere;	Cooling in a nitrogen atmosphere is disclosed at page 25, lines 2-6. Cooling also is discussed at page 14,

atmosphere;	lines 10-15.
forming a medical implant from the cross-linked fabricated article; and	Medical implants formed from the cross-linked polyethylene disclosed at page 2, lines 6-10; page 4, lines 20-26 and Examples 3 and 6.
sterilizing the packaged implant using standard means.	Sterilization, such as by heat (steam), is a known requirement for medical implants. See page 8, lines 19-22.
<b>125.</b> A process for preparing a medical implant having an improved balance of wear properties and oxidation resistance comprising the steps of:	Improved mechanical properties are disclosed at pages 10-11 and Tables 1-6. Medical implants are disclosed at page 1, lines 3-5 and original claims 1-12. Oxidation resistance is discussed at page 3, lines 6-7, and page 23, lines 16-17. Wear resistance is discussed at page 2, line 23 and page 23, last paragraph.
irradiating a fabricated article comprising ultrahigh molecular weight polyethylene to form free radicals in the ultrahigh molecular weight polyethylene;	Types of polyethylene, including ultrahigh molecular weight polyethylene, are disclosed at page 16, lines 4-7. Irradiation is disclosed at page 13, line 22. Formation of free radicals is a natural consequence of irradiation and results in the creation of cross-links upon recombination. See page 10, lines 14-15; page 14, line 26 to page 15, line 5; and page 23, lines 7-14. Fabricated articles are

	disclosed at page 3, last paragraph and the paragraph bridging pages 11-12.
heating the fabricated article in a substantially oxygen-free atmosphere at a temperature above about 150°C, to cross-link the ultrahigh molecular weight polyethylene;	Temperatures above the melting point, including those above 150°C, are disclosed at page 4, lines 10-11; page 13, lines 14-15 and Example 3. The use of a low oxygen-containing nitrogen atmosphere in Example 3. Cross-links are discussed at page 13, lines 28-29 and page 14, line 5.
cooling the cross-linked fabricated article while maintaining a substantially oxygen-free atmosphere; and	Cooling in a nitrogen atmosphere is disclosed at page 25, lines 2-6. Cooling also is discussed at page 14, lines 10-15.
forming a medical implant from the cross-linked fabricated article.	Medical implants formed from the cross-linked polyethylene disclosed at page 2, lines 6-10; page 4, lines 20-26; and Examples 3 and 6.
<b>126.</b> A medical implant prepared according to the process of claim 124.	See discussion for claim 124.
<b>127.</b> A medical implant prepared according to the process of claim 125.	See discussion for claim 125.
<b>128.</b> A cross-linked ultrahigh molecular weight polyethylene (UHMWPE) having a swell ratio of less than about 5 and has a degree of oxidation ranging from about 0.01 to about	Improved mechanical properties are disclosed at pages 10-11 and Tables 1-6. Swell ratios that are less than 5 are disclosed at Tables 2 and 6.

<p>0.15 at a depth of between about 20 <math>\mu</math>m to about 3 mm of the cross-linked UHMWPE, wherein the cross-linked UHMWPE is made by the process according to claim 147.</p>	<p>Minimized oxidation is discussed at page 10, last paragraph and page 22. Cross-links are discussed at page 13, lines 28-29 and page 14, line 5. Types of polyethylene, including ultrahigh molecular weight polyethylene, are disclosed at page 16, lines 4-7. Irradiation is disclosed at page 13, line 22. Temperatures above the melting point are disclosed at page 4, lines 10-11; page 13, lines 14-15 and Example 3. Cooling in a nitrogen atmosphere is disclosed at page 25, lines 2-6. Cooling also is discussed at page 14, lines 10-15. It is the above starting materials and production steps that result in the cross-linked ultrahigh molecular weight polyethylene. See the discussion for claim 125.</p>
<p><b>129.</b> A medical implant comprising the ultrahigh molecular weight polyethylene of claim 128.</p>	<p>See claim 128 above. Medical implants made from cross-linked ultrahigh molecular weight polyethylene having improved mechanical properties are disclosed at page 1, lines 3-5 and original claims 1-12.</p>
<p><b>130.</b> A process for preparing a medical implant having an improved balance of wear</p>	<p>Improved mechanical properties are disclosed at pages 10-11 and Tables</p>

<p>properties and oxidation resistance comprising the steps of:</p>	<p>1-6. Oxidation resistance is discussed at page 3, lines 6-7, and page 23, lines 16-17. Wear properties are discussed at page 2, line 23 and page 23, last paragraph.</p>
<p>irradiating a fabricated article comprising ultrahigh molecular weight polyethylene to form free radicals in the ultrahigh molecular weight polyethylene;</p>	<p>Fabricated articles are discussed at page 3, last paragraph; the paragraph bridging pages 11 and 12 and Examples 3 and 6. Types of polyethylene, including ultrahigh molecular weight polyethylene, are disclosed at page 16, lines 4-7. Irradiation is disclosed at page 13, line 22. Temperatures above the melting point are disclosed at page 4, lines 10-11; page 13, lines 14-15 and Example 3. Formation of free radicals is a natural consequence of irradiation and results in the creation of cross-links upon recombination. See page 10, lines 14-15; page 14, line 26 to page 15, line 5; and page 23, lines 7-14.</p>
<p>heating the fabricated article to a temperature at or above about 150°C, for a time sufficient to recombine substantially all of the free radicals and cross-link the ultrahigh molecular weight polyethylene;</p>	<p>Temperatures above the melting point, including those above 150°C, are disclosed at page 4, lines 10-11; page 13, lines 14-15 and Example 3. Recombination of free radicals is discussed at page 23, lines 7-17 and</p>

	original claim 2.
cooling the cross-linked fabricated article;	Cooling is discussed at page 14, lines 10-15 and page 25, lines 2-6.
forming a medical implant from the cross-linked fabricated article; and	Medical implants formed from the cross-linked polyethylene disclosed at page 2, lines 6-10, page 4, lines 20-26 and Examples 3 and 6.
sterilizing the implant using standard means.	Sterilization, such as by heat (steam), is a known requirement for medical implants. See page 8, lines 19-22.
<b>143.</b> A process for preparing a medical implant having improved wear and oxidation resistance, wherein the method comprises:	Improved mechanical properties are disclosed at pages 10-11 and Tables 1-6. Oxidation resistance is discussed at page 3, lines 6-7, and page 23, lines 16-17. Wear properties are discussed at page 2, line 23 and page 23, last paragraph.
irradiating a fabricated article comprising ultrahigh molecular weight polyethylene to form free radicals in the ultrahigh molecular weight polyethylene;	Types of polyethylene, including ultrahigh molecular weight polyethylene, are disclosed at page 16, lines 4-7. Irradiation is disclosed at page 13, line 22. Polyethylene articles are disclosed at the paragraph bridging pages 11 and 12 and Examples 3 and 6.
heating the fabricated article to a temperature at or above the melting point such that the free	Temperatures above the melting point are disclosed at page 4, lines 10-11;



radicals can recombine, thereby forming a cross-linked polyethylene article;	page 13, lines 14-15 and Example 3. Recombination of free radicals is discussed at page 23, lines 7-17 and original claim 2.
forming an implant from the cross-linked fabricated article; and	Medical implants formed from the cross-linked polyethylene disclosed at page 2, lines 6-10, page 4, lines 20-26 and Examples 3 and 6.
sterilizing the implant using standard means.	Sterilization, such as by heat, is a known requirement for medical implants. See page 8, lines 19-22.
<b>144.</b> The process according to claim 143, wherein the standard means include heat.	Sterilization, such as by heat, is a known requirement for medical implants. See page 8, lines 19-22.
<b>145.</b> The process according to claim 124, wherein the standard means include heat.	Sterilization, such as by heat, is a known requirement for medical implants. See page 8, lines 19-22.
<b>146.</b> The process according to claim 130, wherein the standard means include heat.	Sterilization, such as by heat, is a known requirement for medical implants. See page 8, lines 19-22.
<b>147.</b> A process for preparing a medical implant having improved wear and oxidation resistance, wherein the method comprises:	Oxidation resistance is discussed at page 3, lines 6-7, and page 23, lines 16-17. Wear properties are discussed at page 2, line 23 and page 23, last paragraph.
irradiating and melting a fabricated	Types of polyethylene, including

<p>article comprising ultrahigh molecular weight polyethylene in order to form free radicals in the ultrahigh molecular weight polyethylene and cross-link the ultrahigh molecular weight polyethylene and then allowing the fabricated article to cool; and</p>	<p>ultrahigh molecular weight polyethylene, are disclosed at page 16, lines 4-7. Irradiation is disclosed at page 13, line 22. Polyethylene articles are disclosed at the paragraph bridging pages 11 and 12 and Examples 3 and 6. Temperatures above the melting point are disclosed at page 4, lines 10-11; page 13, lines 14-15 and Example 3. Formation of free radicals is a natural consequence of irradiation and results in the creation of cross-links upon recombination. See page 10, lines 14-15; page 14, line 26 to page 15, line 5; and page 23, lines 7-14. Cooling is discussed at page 12, lines 21-24, page 22, lines 22-28 and page 25, lines 21-24.</p>
<p>forming an implant from the cross-linked fabricated article.</p>	<p>Medical implants formed from the cross-linked polyethylene disclosed at page 2, lines 6-10, page 4, lines 20-26 and Examples 3 and 6.</p>
<p><b>148.</b> The process according to claim 147, further comprising sterilizing the implant using standard means.</p>	<p>Sterilization, such as by heat, is a known requirement for medical implants. See page 8, lines 19-22.</p>

<b>149.</b> The process according to claim 148, wherein the standard means include heat.	Sterilization, such as by heat, is a known requirement for medical implants. See page 8, lines 19-22.
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As shown above, each of the pending claims find enabling written description in the '744 application, meaning that the '744 application shows possession of the claimed invention and enables the skilled person to make and use the claimed invention without having to resort to undue experimentation. Therefore, the application is entitled to a priority date of February 13, 1996.

The claims also are supported by U.S. application serial no. 08/726,313, filed October 2, 1996, which incorporates by reference the '744 application. Exemplary support is set forth below:

U.S. Serial No. 08/726,313

<b>CLAIM</b>	<b>EXEMPLARY SUPPORT IN THE '313 APPLICATION</b>
<b>124.</b> A process for preparing a medical implant having an improved balance of wear properties and oxidation resistance comprising the steps of:	Improved mechanical properties are disclosed at pages 10,11, 19 and 42-43; and Tables 1-6. Medical implants are disclosed at page 1, lines 12-15 and original claims 1-12, and methods of making are disclosed in Examples 1-8. Oxidation and oxidation resistance are discussed at page 3, lines 13-16; page 10, first and second

	<p>paragraphs; page 11, second full paragraph and pages 41-42. Wear and wear resistance is discussed on page 11, second full paragraph, and section c on pages 44-45.</p>
<p>irradiating a fabricated article comprising ultrahigh molecular weight polyethylene to form free radicals in the ultrahigh molecular weight polyethylene;</p>	<p>Types of polyethylene, including ultrahigh molecular weight polyethylene, are disclosed at page 24, lines 13-19. Fabricated articles are disclosed at page 11, second full paragraph; page 12, first full paragraph; and Examples 2, 3 and 6. Irradiation is disclosed at page 13, and page 22, lines 13-14. Formation of free radicals is a natural consequence of irradiation and results in the creation of cross-links upon recombination. See page 9, lines 9-26; page 12, lines 15-21.</p>
<p>heating the fabricated article in a substantially oxygen-free atmosphere to a temperature above about 150°C, for a time sufficient to recombine substantially all of the free radicals and cross-link the ultrahigh molecular weight polyethylene;</p>	<p>Temperatures above the melting point, including those above 150°C, are disclosed at page 14, lines 2-7, and page 21, first full paragraph. The use of a low oxygen-containing nitrogen atmosphere is disclosed in Example 3. Recombination of free radicals is discussed at page 14. The use of other gases and a vacuum are disclosed at page 14 and Example 13.</p>

cooling the cross-linked fabricated article while maintaining a substantially oxygen-free atmosphere;	Cooling in a nitrogen atmosphere is disclosed at page 25, lines 21-24. Cooling also is discussed at page 12, lines 21-24 and page 22, lines 22-28.
forming a medical implant from the cross-linked fabricated article; and	Medical implants formed from the cross-linked polyethylene disclosed at Examples 3 and 6.
sterilizing the packaged implant using standard means.	Sterilization is a known requirement for medical implants. See page 8, last paragraph, disclosing the use of ethylene oxide and heat.
<b>125.</b> A process for preparing a medical implant having an improved balance of wear properties and oxidation resistance comprising the steps of:	Improved mechanical properties are disclosed at pages 10,11, 19 and 42-43; and Tables 1-6. Medical implants are disclosed at page 1, lines 12-15 and original claims 1-12, and methods of making are disclosed in Examples 1-8. Oxidation and oxidation resistance are discussed at page 3, lines 13-16; page 10, first and second paragraphs; page 11, second full paragraph and pages 41-42. Wear and wear resistance is discussed on page 11, second full paragraph, and section c on pages 44-45.
irradiating a fabricated article comprising ultrahigh molecular weight polyethylene to form free radicals;	Types of polyethylene, including ultrahigh molecular weight polyethylene, are disclosed at page

form free radicals;	24, lines 13-19. Fabricated articles are disclosed at page 11, second full paragraph; page 12, first full paragraph; and Examples 2, 3 and 6. Irradiation is disclosed at page 13, and page 22, lines 13-14. Formation of free radicals is a natural consequence of irradiation and results in the creation of cross-links upon recombination. See page 9, lines 9-26; page 12, lines 15-21.
heating the fabricated article in a substantially oxygen-free atmosphere to a temperature above about 150°C, to cross-link the ultrahigh molecular weight polyethylene;	Temperatures above the melting point, including those above 150°C, are disclosed at page 14, lines 2-7, and page 21, first full paragraph. The use of a low oxygen-containing nitrogen atmosphere is disclosed in Example 3. Recombination of free radicals is discussed at page 14. The use of other gases and a vacuum are disclosed at page 14 and Example 13.
cooling the cross-linked fabricated article while maintaining a substantially oxygen-free atmosphere; and	Cooling in a nitrogen atmosphere is disclosed at page 25, lines 21-24. Cooling also is discussed at page 12, lines 21-24 and page 22, lines 22-28.
forming a medical implant from the cross-linked preform.	Medical implants formed from the cross-linked polyethylene disclosed at Examples 3 and 6.

<b>126.</b> A medical implant prepared according to the process of claim 124.	See discussion for claim 124.
<b>127.</b> A medical implant prepared according to the process of claim 125.	See discussion for claim 125.
<b>128.</b> A cross-linked ultrahigh molecular weight polyethylene (UHMWPE) having a swell ratio of less than about 5 and has a degree of oxidation ranging from about 0.01 to about 0.15 at a depth of between about 20 $\mu$ m to about 3 mm of the cross-linked UHMWPE, wherein the cross-linked UHMWPE is made by the process according to claim 147.	Improved mechanical properties are disclosed at pages 10,11, 19 and 42-43; Tables 1-6 and Examples 4 and 5. Oxidation resistance is discussed at page 3, lines 13-16 and Example 11 and oxidation levels are discussed at Table 17. Swell ratios are disclosed at pages 45-46.
<b>129.</b> A medical implant comprising the ultrahigh molecular weight polyethylene of claim 128.	Medical implants formed from the cross-linked polyethylene disclosed at Examples 3 and 6. See also the discussion for claim 128.
<b>130.</b> A process for preparing a medical implant having an improved balance of wear properties and oxidation resistance comprising the steps of:	Improved mechanical properties are disclosed at pages 10,11, 19 and 42-43; and Tables 1-6. Medical implants are disclosed at page 1, lines 12-15 and original claims 1-12, and methods of making are disclosed in Examples 1-8. Oxidation and oxidation resistance are discussed at page 3, lines 13-16; page 10, first and second paragraphs; page 11, second full paragraph and pages 41-42. Wear and wear resistance is discussed on

	page 11, second full paragraph, and section c on pages 44-45.
irradiating a fabricated article comprising ultrahigh molecular weight polyethylene to form free radicals in the ultrahigh molecular weight polyethylene;	Types of polyethylene, including ultrahigh molecular weight polyethylene, are disclosed at page 24, lines 13-19. Fabricated articles are disclosed at page 11, second full paragraph; page 12, first full paragraph; and Examples 2, 3 and 6. Irradiation is disclosed at page 13, and page 22, lines 13-14. Formation of free radicals is a natural consequence of irradiation and results in the creation of cross-links upon recombination. See page 9, lines 9-26; page 12, lines 15-21.
heating the fabricated article to a temperature at or above about 150°C, for a time sufficient to recombine substantially all of the free radicals and cross-link the ultrahigh molecular weight polyethylene;	Temperatures above the melting point, including those above 150°C, are disclosed at page 14, lines 2-7, and page 21, first full paragraph. The use of a low oxygen-containing nitrogen atmosphere is disclosed in Example 3. Recombination of free radicals is discussed at page 14. The use of other gases and a vacuum are disclosed at page 14 and Example 13.
cooling the cross-linked fabricated article;	Cooling is discussed at page 12, lines 21-24, page 22, lines 22-28 and page



	25, lines 21-24.
forming a medical implant from the cross-linked fabricated article; and	Medical implants formed from the cross-linked polyethylene disclosed at Examples 3 and 6.
sterilizing the implant using standard means.	Sterilization is a known requirement for medical implants. See page 8, last paragraph, disclosing the use of ethylene oxide and heat.
<b>143.</b> A process for preparing a medical implant having improved wear and oxidation resistance, wherein the method comprises:	Improved mechanical properties are disclosed at pages 10,11, 19 and 42-43; and Tables 1-6. Medical implants are disclosed at page 1, lines 12-15 and original claims 1-12, and methods of making are disclosed in Examples 1-8. Oxidation and oxidation resistance are discussed at page 3, lines 13-16; page 10, first and second paragraphs; page 11, second full paragraph and pages 41-42. Wear and wear resistance is discussed on page 11, second full paragraph, and section c on pages 44-45.
irradiating a fabricated article comprising ultrahigh molecular weight polyethylene to form free radicals in the ultrahigh molecular weight polyethylene;	Types of polyethylene, including ultrahigh molecular weight polyethylene, are disclosed at page 24, lines 13-19. Polyethylene articles are disclosed at page 11, second full paragraph; page 12, first full

	paragraph; and Examples 2, 3 and 6. Irradiation is disclosed at page 13., and page 22, lines 13-14. Formation of free radicals is a natural consequence of irradiation and results in the creation of cross-links upon recombination. See page 9, lines 9-26; page 12, lines 15-21.
heating the fabricated article to a temperature at or above the melting point such that the free radicals can recombine, thereby forming a cross-linked fabricated article;	Temperatures above the melting point, including those above 150°C, are disclosed at page 14, lines 2-7, and page 21, first full paragraph. Recombination of free radicals is discussed at page 14.
forming an implant from the cross-linked fabricated article; and	Medical implants formed from the cross-linked polyethylene disclosed at Examples 3 and 6.
sterilize the implant using standard means.	Sterilization is a known requirement for medical implants. See page 8, last paragraph, disclosing the use of ethylene oxide and heat.
<b>144.</b> The process according to claim 143, wherein the standard means include heat.	Sterilization is a known requirement for medical implants. See page 8, last paragraph, disclosing the use of ethylene oxide and heat.
<b>145.</b> The process according to claim 124, wherein the standard means include heat.	Sterilization is a known requirement for medical implants. See page 8, last paragraph, disclosing the use of

	paragraph, disclosing the use of ethylene oxide and heat.
<b>146.</b> The process according to claim 130, wherein the standard means include heat.	Sterilization is a known requirement for medical implants. See page 8, last paragraph, disclosing the use of ethylene oxide and heat.
<b>147.</b> A process for preparing a medical implant having improved wear and oxidation resistance, wherein the method comprises:	Improved mechanical properties are disclosed at pages 10,11, 19 and 42-43; and Tables 1-6. Medical implants are disclosed at page 1, lines 12-15 and original claims 1-12, and methods of making are disclosed in Examples 1-8. Oxidation and oxidation resistance are discussed at page 3, lines 13-16; page 10, first and second paragraphs; page 11, second full paragraph and pages 41-42. Wear and wear resistance is discussed on page 11, second full paragraph, and section c on pages 44-45.
irradiating and melting a fabricated article comprising ultrahigh molecular weight polyethylene in order to form free radicals in the ultrahigh molecular weight polyethylene and cross-link the ultrahigh molecular weight polyethylene and then allowing the fabricated article to cool; and	Types of polyethylene, including ultrahigh molecular weight polyethylene, are disclosed at page 24, lines 13-19. Polyethylene articles are disclosed at page 11, second full paragraph; page 12, first full paragraph; and Examples 2, 3 and 6. Irradiation is disclosed at page 13., and page 22, lines 13-14. Formation

	<p>of free radicals is a natural consequence of irradiation and results in the creation of cross-links upon recombination. See page 9, lines 9-26; page 12, lines 15-21.</p> <p>Temperatures above the melting point, including those above 150°C, are disclosed at page 14, lines 2-7, and page 21, first full paragraph.</p> <p>Recombination of free radicals is discussed at page 14. Cooling is discussed at page 12, lines 21-24, page 22, lines 22-28 and page 25, lines 21-24.</p>
forming an implant from the cross-linked fabricated article.	Medical implants formed from the cross-linked polyethylene disclosed at Examples 3 and 6.
<b>148.</b> The process according to claim 147, further comprising sterilizing the implant using standard means.	Sterilization is a known requirement for medical implants. See page 8, last paragraph, disclosing the use of ethylene oxide and heat.
<b>149.</b> The process according to claim 148, wherein the standard means include heat.	Sterilization is a known requirement for medical implants. See page 8, last paragraph, disclosing the use of ethylene oxide and heat.

In view of the above, applicants reiterate that they are entitled to the first priority date of February 13, 1996, which is over seven months earlier than the October 2, 1996 filing date of the Saum *et al.* provisional application. Thus, the '975 patent is not prior art to the instant claims. Second, the filing date of the '975 application is not prior to applicants' second priority date. Both the Saum *et al.* provisional application (which the Examiner has not demonstrated to be an effective date for section 102(e) purposes) and applicants' second priority date fall on the same date, namely October 2, 1996. The requirements of 35 USC § 102(a) require the prior art to be "before" the invention date of the applicant, which at this stage is based upon the application filing date. Here, the October 2, 1996 filing date of the provisional application referenced by the '975 patent is not before applicants' February 13, 1996 and October 2, 1996 filing dates. Accordingly, the '975 patent is not prior art.

Furthermore, applicants reiterate that the Examiner is not entitled to use the '975 patent in a rejection for the following reasons. The '975 patent is a target of applicants' request for interference. A target patent can only be used as a reference against the interfering application if the target patent is a reference under (i) 35 USC § 102(b) or (ii) 35 USC § 102(e) when an applicant has not made a showing as required by 37 CFR § 1.608. See MPEP § 2306 at page 2300-12, column 1 (August 2001). A rejection applying the '975 patent under 35 USC § 102(a), is not permitted.

The '975 patent is not a reference under 35 USC § 102(b) or (e), and applicants have previously made the requisite showing under 37 CFR § 1.608(a) (which has recently been replaced). Accordingly, the rejection should be withdrawn, and the Examiner should take the required steps to propose an interference in accordance with

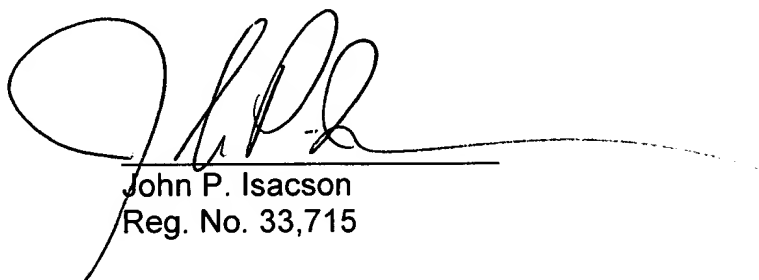
MPEP § 2306.01 (August 2001). In the instant situation, only the Patent Office Board of Appeals and Interferences has the jurisdiction to decide patentability to Saum *et al.* or applicants.

Applicants presented these arguments in the amendment filed November 17, 2004. These arguments were not addressed by the examiner, however.

***Request***

Applicants submit that the claims are in condition for allowance, and respectfully request favorable consideration to that effect so that an interference can be declared with applicants as the senior party by virtue of the priority afforded by the priority applications. Applicants reserve the right to present a new count in view of applicants' claim amendments and new Rule 37 CFR § 41.202, and applicants suggest that the count be applicants' claim 147, claim 15 of the Saum '975 patent, and claim 1 of the Saum '507 patent. The examiner is invited to contact the undersigned at (202) 912-2000 should there be any questions.

Respectfully submitted,



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April 28, 2005  
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